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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/661,322
Filing Date: September 12, 2003
Appellant(s): PARIDA ET AL.

Mr. Kevin M. Mason
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 5/17/2007 appealing from the Office action mailed 9/5/2006**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

This appeal involves claims 1-29.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows: Only claims 1-29 are rejected under 35 U.S.C. §101 due to lacking a practical application are to reviewed on appeal. Rejection of claims 1-17, 20-26 and 29 under 35 U.S.C. §102(b) are withdrawn. Rejection of claims 18-19, 27-28 under 35 U.S.C. §103(a) are withdrawn.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-29 are rejected under 35 U.S.C. 101 for nonstatutory subject matter. The computer system must set forth a practical application of that § 101 judicial exception to produce a real-world result. The claims fail to provide a tangible result, and there must be a practical application, by either

1) transforming (physical thing) or

2) by having the FINAL RESULT (not the steps) achieve or produce

a useful (specific, substantial, AND credible),

concrete (substantially repeatable/non-unpredictable), AND

tangible (real world/non-abstract) result.

A claim that is so broad that it reads on both statutory and non-statutory subject matter, must be amended. A claim that recites a computer that solely calculates a mathematical formula is not statutory.

The Courts have found that subject matter that is not a practical application or use of an idea, a law of nature or a natural phenomenon is not patentable. As the Supreme Court has made clear, " [a]n idea of itself is not patentable," *Rubber-Tip Pencil Co. v. Howard,* 20 U.S. (1 Wall.) 498, 507 (1874); taking several abstract ideas and manipulating them together adds nothing to the basic equation. In re Warmerdam, 31 USPQ2d 1754 (Fed. Cir. 1994).

The courts have also held that a claim may not preempt ideas, laws of nature or natural phenomena. The concern over preemption was expressed as early as 1852. See Le Roy v. Tatham, 55 U.S. (14 How.) 156, 175 (1852) ("A principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right."); Funk Bros. Seed Co. v. Kalo Inoculant Co., 333 U.S. 127, 132, 76 USPQ 280, 282 (1948).

Accordingly, one may not patent every "substantial practical application" of an idea, law of nature or natural phenomena because such a patent "in practical effect would be a patent on the [idea, law of nature or natural phenomena] itself." "Here the "process" claim is so abstract and sweeping as to cover both known and unknown uses of the BCD to pure-binary conversion. The end use may (1) vary from the operation of a train to verification of drivers' licenses to researching the law books for precedents and (2) be performed through any existing machinery or future-devised machinery or without any apparatus." Gottschalk v. Benson, 409 U.S. 63, 71-72, 175 USPQ 673, 676 (1972).

In the present case, the application is an algorithm that searches for patterns along a one-dimensional array. There has to be an application for this method to be employed with to have a useful purpose.

In determining whether the claim is for a "practical application," the focus is not on whether the steps taken to achieve a particular result are useful, tangible and concrete, but rather that the final result achieved by the claimed invention is "useful, tangible and concrete." If the claim is directed to a practical application of the § 101 judicial exception producing a result tied to the physical world that does not preempt the judicial exception, then the claim meets the statutory requirement of 35 U.S.C. § 101.

Finding patterns in strings at an academic level is not clear in its purpose or scope. There has to be a reason for finding such strings and their usefulness in a real world application, is questioned. The application as it stands is strictly an academic exercise with no useful and tangible function and/or result.

Response to Argument

The Appellant argues that given an input string and transforming this into permutation patterns provides a useful, concrete and tangible result.

In response to the Appellant's argument, this is simply a mathematical construct using sets, which alters data from one form into another without any declared practical application. The statement in paragraph 0002, 'Permutations patterns have a variety of practical uses' recites no practical purpose and states unknown uses. Citing Gottschalk v Benson "Here the "process" claim is so abstract and sweeping as to cover both known

and unknown uses of the BCD to pure-binary conversion. The end use may (1) vary from the operation of a train to verification of drivers' licenses to researching the law books for precedents and (2) be performed through any existing machinery or future-devised machinery or without any apparatus." Gottschalk v. Benson, 409 U.S. 63, 71-72, 175 USPQ 673, 676 (1972). The permutations of characters within a portion of an input string and a name given to the permutations of characters within a portion of an input string discloses no practical application. The Appellant fails to disclose how the invention is to be employed, therefore the 'input string' is not defined which leads to numerous applications. Appellant agrees with the Examiner in paragraph 0002, in which the 'permutation patterns have a variety of practical uses.'

Appellant argues that a practical application is stated within the Background section of the application in which 'permutations patterns are utilized in medical applications related to genes and proteins.' This is background information is vague at best and no practical application is stated in the Summary of the Invention or within the claims.

The first two sentences of paragraph 0019 state that the application is an abstract concept. 'The present invention allows permutation patterns to be discovered. In this disclosure, the abstract problem of discovering permutation patterns is formed as a discovery problem called the π pattern problem and techniques that automatically discover permutations in, for instance, multiple input patterns are given.' Within these two sentences the Appellant admits that the discovery or permutation patterns is an abstract concept, therefore lacking a practical application.

In summary, the Appellant admits to unknown uses for the invention. Relies on 'Background' to supply a practical application for the invention. And in paragraph 0019, admits that the invention is an 'abstract problem.' The Examiner determines that the Appellant claims no practical application.

Examiner finds that In re Warmerdam, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994) controls the 35 U.S.C. §101 issues on that point for reasons made clear by the Federal Circuit in AT&T Corp. v. Excel Communications, Inc., 50 USPQ2d 1447 (Fed. Cir. 1999). Specifically, the Federal Circuit held that the act of making several abstract ideas and manipulating them together adds nothing to the basic equation. AT&T v. Excel at 1453 quoting In re Warmerdam, 33 F.3d 1354, 1360 (Fed. Cir. 1994). Examiner finds that Applicant's permutation patterns references are just such abstract ideas.

Examiner bases his position upon guidance provided by the Federal Circuit in/n re Warmerdam, as interpreted by AT&T v. Excel. This set of precedents is within the same line of cases as the Alappat-State Street Bank decisions and is in complete agreement with those decisions. Warmerdam is consistent with State Streets holding that today we hold that the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation because it produces 'a useful, concrete and tangible result" -- a final share price momentanly fixed for recording purposes and even accepted and relied upon by

regulatory authorities and in subsequent trades. (emphasis added) State Street Bank at 1601.

True enough, that case later eliminated the "business method exception" in order to show that business methods were not per se nonstatutory, but the court clearly did not go so far as to make business methods per se statutory. A plain reading of the excerpt above shows that the Court was very specific in its definition of the new practical application. It would have been much easier for the court to say that "business methods were per se statutory" than it was to define the practical application in the case as "...the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price..."
The court was being very specific.

Additionally, the court was also careful to specify that the "useful, concrete and tangible result" it found was "a final share price momentarily fixed for recording purposes and even accepted and relied upon by regulatory authorities and in subsequent trades." (i.e. the trading activity is the further practical use of the real world monetary data beyond the transformation in the computer- i.e., "post-processing activity".)

Applicant cites no such specific results to define a useful, concrete and tangible result. Neither does Applicant specify the associated practical application with the kind of specificity the Federal Circuit used.

Furthermore, in the case In re Warmerdam, the Federal Circuit held that:

The dispositive issue for assessing compliance with Section 101 in this case is whether the claim is for a process that goes beyond simply manipulating 'abstract ideas' or 'natural phenomena' ... As the Supreme Court has made clear, '[a]n idea of itself is not patentable .... taking several abstract ideas and manipulating them together adds nothing to the basic equation. In re Warmerdam 31 USPQ2d at 1759 (emphasis added). Since the Federal Circuit held in Warmerdam that this is the "dispositive issue" when it judged the usefulness, concreteness, and tangibility of the claim limitations in that case, Examiner in the present case views this holding as the dispositive issue for determining whether a claim is "useful, concrete, and tangible" in similar cases. Accordingly, the

Since the claims are not limited to exclude such abstractions, the broadest reasonable interpretation of the claim limitations includes such abstractions. Therefore, the claims are impermissibly abstract under 35 U.S.C. §101 doctrine.
Since Warmerdam is within the Alappat-State Street Bank line of cases, it takes the same view of "useful, concrete, and tangible" the Federal Circuit applied in State Street Bank. Therefore, under State Street Bank, this could not be a "useful, concrete and tangible result". There is only manipulation of abstract ideas.

The Federal Circuit validated the use of Warmerdam in its more recent AT&T Corp. v. Excel Communications, Inc. decision. The Court reminded us that:

> Finally, the decision in In re Warmerdam, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994) is not to the contrary. *** The court found that the claimed process did nothing more than manipulate basic mathematical constructs and concluded that 'taking several abstract ideas and manipulating them together adds nothing to the basic equation'; hence, the court held that the claims were properly rejected under §101 ... Whether one agrees with the court's conclusion on the facts, the holding of the case is a straight forward application of the basic principle that

> mere laws of nature, natural phenomena, and abstract ideas are not within the categories of inventions or discoveries that may be patented under §101. (emphasis added) AT&T Corp. v. Excel Communications, Inc., 50 USPQ2d 1447, 1453 (Fed. Cir. 1999).

Remember that in In re Warmerdam, the Court said that this was the dispositive issue to be considered. In the AT&Tdecision cited above, the Court reaffirms that this is the issue for assessing the "useful, concrete, and tangible" nature of a set of claims under 101 doctrine. Accordingly, Examiner views the Warmerdam holding as the dispositive issue in this analogous case.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Peter Coughlan

Appeal Conferee:

David Vincent

DAVID VINCENT 7/29/07
SUPERVISORY PATENT EXAMINER

Appeal Conferee:

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